

## **DECLARATION OF PERFORMANCE, UPM PLYWOOD**

**No. UPM008CPR**

1. Unique identification code of the product-type:  
Structural birch plywood, uncoated or coated, 12–35 mm
2. Intended uses:  
For internal use as a structural component in dry conditions, EN 636-1  
For protected external use as a structural component in humid conditions, EN 636-2  
For external use as a structural component with coating and edge sealing, EN 636-3
3. Manufacturer:  
WISA®  
UPM Plywood Oy  
P.O. Box 203  
FI-15141 Lahti, Finland  
[www.wisaplywood.com](http://www.wisaplywood.com)
5. System of AVCP:  
AVCP system 2+
- 6a. Harmonised standard:  
EN 13986:2004 + A1:2015

**Notified body:**

Inspecta Sertifiointi Oy No. 0416 has performed the initial inspection of the manufacturing plant and a factory production control and continuous surveillance, assessment and evaluation of factory production control and issued the certificates of conformity of the factory production control 0416-CPR-7108 (Joensuu), 0416-CPR-7109 (Jyväskylä), 0416-CPR-7110 (Pellos), 0416-CPR-7111 (Savonlinna), 0416-CPR-7112 (Chudovo), 0416-CPR-7113 (Otepää).

7. Declared performance:

Essential characteristics	Performance	Harmonised standard
Point load strength and stiffness	NPD	EN 13986:2004+A1:2015
Racking resistance	Calculation according to EN 1995-1-1	
Impact resistance	NPD	
Water vapour permeability $\mu$	Wet 90, dry 220 (uncoated)	
	Mean density 680kg/m <sup>3</sup>	
Release of formaldehyde	E1	
Content of pentachlorophenol (PCP)	≤ 5 ppm	
Airborne sound insulation	NPD	
Sound absorption $\alpha$	0,10/0,30	
Thermal conductivity $\lambda$	0,17 W/mK	
Embedment strength	Calculation according to EN 1995-1-1	
Air permeability	NPD	
Bonding quality (acc. to EN 314-2)	Class 3	
Biological durability	Use class 2 (uncoated)	
	Use class 3 (coated and edge sealed)	

Reaction to fire			
End use condition <sup>(6)</sup>	Minimum thickness (mm)	Class <sup>(7)</sup> (excluding floorings)	Class <sup>(8)</sup> (floorings)
Without an air gap behind the wood-based panel <sup>(1), (2), (5)</sup>	12	D-s2, d0	D <sub>fi</sub> -s1
With a closed or an open air gap not more than 22 mm behind the wood-based panel <sup>(3), (5)</sup>	12	D-s2, d2	-
With a closed air gap behind the wood-based panel <sup>(4), (5)</sup>	15	D-s2, d1	D <sub>fi</sub> -s1
With an open air gap behind the wood-based panel <sup>(4), (5)</sup>	18	D-s2, d0	D <sub>fi</sub> -s1

<sup>(1)</sup> Mounted without an air gap directly against class A1 or A2-s1, d0 products with minimum density 10kg/m<sup>3</sup> or at least class D-s2, d2.

<sup>(2)</sup> A substrate of cellulose insulation material of at least class E may be included if mounted directly against the wood-based panel, but not for floorings.

<sup>(3)</sup> Mounted with an air gap behind. The reverse face of the cavity shall be at least class A2-s1, d0 products with minimum density 10 kg/m<sup>3</sup>.

<sup>(4)</sup> Mounted with an air gap behind. The reverse face of the cavity shall be at least class D-s2, d2 products with minimum density 400 kg/m<sup>3</sup>.

<sup>(5)</sup> Veneered, phenol- and melamine-faced panels are included for class excl. floorings.

<sup>(6)</sup> A vapour barrier with a thickness up to 0,4 mm and a mass up to 200 g/m<sup>2</sup> can be mounted in between the wood-based panel and a substrate if there are no air gaps in between.

<sup>(7)</sup> Class as provided for in Table 1 of the Annex to Decision 2000/147/EC.

<sup>(8)</sup> Class as provided for in Table 2 of the Annex to Decision 2000/147/EC.

Nominal thickness	12	15	18	21	22	24	25	27	28	30	31	35	
Number of plies	9	11	13	15	16	17	18	19	20	21	22	25	
Essential characteristics	Performance												
Characteristic bending strength N/mm <sup>2</sup>	f <sub>m  </sub>	32,0	28,3	26,6	25,8	25,7	25,5	25,2	25,6	25,6	25,7	25,6	26,2
	f <sub>m⊥</sub>	46,5	48,9	49,6	49,5	49,3	49,1	48,6	48,6	48,2	48,0	47,5	46,8
Characteristic compression strength N/mm <sup>2</sup>	f <sub>c  </sub>	15,6	17,6	18,9	19,9	18,6	20,6	19,4	21,2	20,1	21,7	20,7	22,4
	f <sub>c⊥</sub>	36,4	34,4	33,1	32,1	33,4	31,4	32,6	30,8	31,9	30,3	31,3	29,6
Characteristic tension strength	f <sub>t  </sub>	22,5	25,3	27,3	28,7	26,8	29,7	28,0	30,6	29,0	31,3	29,8	32,3
	f <sub>t⊥</sub>	52,5	49,7	47,7	46,3	48,2	45,3	47,0	44,4	46,0	43,8	45,2	42,7
Mean MOE in bending N/mm <sup>2</sup>	E <sub>m  </sub>	7996	7087	6648	6453	6413	6386	6364	6388	6407	6428	6446	6555
	E <sub>m⊥</sub>	9504	10413	10852	11047	11087	11114	11134	11112	11093	11072	11053	10945
Mean MOE in compression and tension N/mm <sup>2</sup>	E <sub>t,c  </sub>	5250	5912	6364	6691	6261	6940	6545	7135	6770	7292	6954	7529
	E <sub>t,c⊥</sub>	12250	11588	11136	10809	11239	10560	10955	10365	10730	10208	10546	9971
Char. panel shear N/mm <sup>2</sup>	f <sub>v  </sub>	9,5											
	f <sub>v⊥</sub>	9,5											
Char. Planar shear N/mm <sup>2</sup>	f <sub>r  </sub>	3,4	2,6				2,5						
	f <sub>r⊥</sub>	2,1	2,3				2,5						
Mean MOR in panel shear N/mm <sup>2</sup>	G <sub>v  </sub>	620											
	G <sub>v⊥</sub>	620											
Mean MOR in planar shear N/mm <sup>2</sup>	G <sub>r  </sub>	143	160	170	180	175							
	G <sub>r⊥</sub>	316	240	220	210	205							
Strength and stiffness under point load	NPD												
Impact resistance	NPD												
k <sub>mod</sub> and k <sub>def</sub> values according to EN 1995-1-1													

Harmonised standard EN 13986:2004+A1:2015

The performance of the product identified above is in conformity with the set of declared performances. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

Lahti, Finland, November 5th, 2018



Sirku Salmikuukka, Product Manager  
UPM Plywood